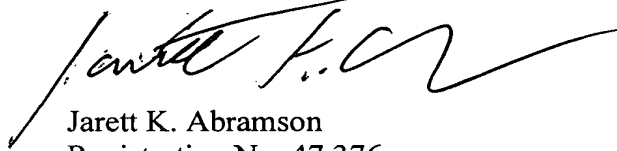


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### REMARKS

The claims have been amended to better conform with U.S. practice, such as removing multiple dependencies. Applicants respectfully request substantive examination on the merits.

Respectfully submitted,



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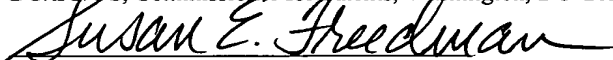
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Susan E. Freedman

Date of Signature: December 21, 2001

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

The following is an addendum to the concurrently filed Preliminary Amendment in the above-referenced application. This addendum includes a marked-up version of the changes made to the claims by the present Preliminary Amendment.

**In the Claims:**

1. (Amended) [Compound] A compound of the general formula (I)



wherein

X is an m-valent unit and

B are identical or different and denote K-R,

wherein

K is a bond or is  $A^1-(A^2-A^3)_k$ -sp, wherein

$A^1$  is  $(CH_2)_tY(CH_2)_u$ , wherein

Y is  $>C=O$ ,  $>NH$ ,  $-O-$ ,  $-S-$  or a bond,

t is an integer from 0 to 6 and

u is an integer from 0 to 6,

$A^2$  is  $-NHCO-$ ,  $-CONH-$ ,  $-OCONH-$  or  $SCONH-$ , or is  $-CO-$ ,

$A^3$  is  $(CH_2)_r$ ,  $O(CH_2)_r$ ,  $NH(CH_2)_r$ ,  $S(CH_2)_r$  or  $-(CHQ)-$ , wherein

r is an integer from 1 to 6 and

Q is a substituted or unsubstituted alkyl or aryl group,

sp is a divalent spacer or a bond, and

k is an integer from 5 to 100, and

R is hydrogen; a ligand suitable for specific bonding to a receptor;  
a marker molecule; or a catalytically active group; and

m is at least 2,

with the proviso that

- (1) in the compound at least one R is not hydrogen,
- (2) there are at least two K that are not a bond, and

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- (3) X, B and m are so selected that an intermolecular association of the K in liquid phase by the formation of hydrogen bonds is possible, with formation of aggregates that present on the surface a plurality of R that are not hydrogen, and
- (4) the molar mass of the fragment  $X(K)_m$  is less than 20,000.

2. (Amended) [Compound] A compound according to claim 1, wherein the molar mass of the fragment  $X(K)_m$  is less than 4,000.

3. (Amended) [Compound] A compound according to [either] claim 1 [or claim 2], wherein

m is an integer from 2 to 4, and

X is  $CH_{4-m}$ ,  $NH_{3-m}$ ,  $N^+H_{4-m}$ ,  $>P^-$  (when  $m = 3$ ),  $>P^+<$  (when  $m = 4$ ),  $>B^-$  (when  $m = 3$ ), a linear atom group  $C_2H_{6-m}$ ,  $>CH(CH_2)_zCH<$ ,  $>C=C<$ ,  $>N-N<$ ,  $>N(CH_2)_zN<$  wherein  $z = 2 - 6$ , when  $m = 4$ , a carbocyclic atom group  $C_6H_6-m$ ,  $C_6H_{12-m}$ , or a heterocyclic atom group  $C_3N_3$  (when  $m = 3$ ),  $C_4N_2$  (when  $m = 4$ ).

4. (Amended) [Compound] A compound according to [any one of claims 1 to 3] claim 1, wherein there are at least 3 K.

5. (Amended) [Compound] A compound according to [any one of claims 1 to 4] claim 1, wherein at least two R are not hydrogen.

6. (Amended) [Compound] A compound according to [any one of claims 1 to 4] claim 1, wherein at least three R are not hydrogen.

7. (Amended) [Compound] A compound according to [any one of claims 1 to 6] claim 1, wherein the ligand R is a mono- or oligo-saccharide, a peptide, a mono- or oligo-nucleotide or a nucleic base and their derivatives and mimetics.

8. (Amended) [Compound] A compound according to claim 7, wherein the saccharide R is sialic acid, sialyl lactose, sialyl lactosamine, lactose, mannose,  $Gal\alpha 1-3Gal$ ,

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Gal $\alpha$ 1-3(Fuc $\alpha$ 1-2)Gal, GalNAc $\alpha$ 1-3(Fuc $\alpha$ 1-2)Gal, Neu5Ac $\alpha$ 2-6GalNAc, SiaLe<sup>A</sup>, SiaLe<sup>X</sup>, HSO<sub>3</sub>Le<sup>A</sup>, HSO<sub>3</sub>Le<sup>X</sup>, Gal $\alpha$ 1-3Gal $\beta$ 1-4GlcNAc, Gal $\alpha$ 1-3Gal $\beta$ 1-4Glc, HSO<sub>3</sub>GlcA $\beta$ 1-3Gal $\beta$ 1-4GlcNAc, N-acetyl-lactosamine or polylactosamine, or wherein the saccharide is sialic acid benzyl glycoside, HSO<sub>3</sub>GlcA $\beta$ 1-3Gal, HSO<sub>3</sub>GlcA $\beta$ 1-3Gal $\beta$ 1-4GlcNAc $\beta$ 1-3Gal $\beta$ 1-4Glc, GalNAc $\alpha$ , GalNAc $\alpha$ 1-3(Fuc $\alpha$ 1-2)Gal $\beta$ 1-4GlcNAc, Gal $\alpha$ 1-3(Fuc $\alpha$ 1-2)Gal $\beta$ 1-4GlcNAc, HSO<sub>3</sub>(Sia)Le<sup>X</sup>, HSO<sub>3</sub>(Sia)Le<sup>A</sup>, Le<sup>Y</sup>, GlcNAc $\beta$ 1-6(GlcNAc $\beta$ 1-3)Gal $\beta$ 1-4Glc, GalNAc $\beta$ 1-4(Neu5Ac $\alpha$ 2-3)Gal $\beta$ 1-4Glc, mannose-6-phosphate, GalNAc $\beta$ 1-4GlcNAc, oligo-sialic acid, N-glycolylneuraminic acid, Gal $\alpha$ 1-4Gal $\beta$ 1-4Glc, Gal $\alpha$ 1-4Gal $\beta$ 1-4GlcNAc.

9. (Amended) [Compound] A compound according to [any one of claims 1 to 8] claim 1, wherein

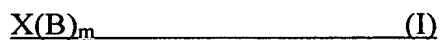
m is an integer from 2 to 4,  
 X is CH<sub>4-m</sub>,  
 A<sup>1</sup> is CH<sub>2</sub>,  
 A<sup>2</sup> is NHCO,  
 A<sup>3</sup> is CH<sub>2</sub>,  
 k is 8,  
 sp is (CH<sub>2</sub>)<sub>3</sub>CONHCH<sub>2</sub>CONHC<sub>6</sub>H<sub>4</sub>-4-CH<sub>2</sub>O- and  
 R is Neu5Ac $\alpha$ 2-6Gal $\beta$ 1-4GlcNAc.

10. (Amended) [Aggregate] An aggregate of the general formula (II):



wherein

X(B)<sub>m</sub> may be identical or different and denote a compound of the general formula (I), [as defined in any one of claims 1 to 11]



wherein

X is an m-valent unit and

B are identical or different and denote K-R,

wherein

K is a bond or is A<sup>1</sup>-(A<sup>2</sup>-A<sup>3</sup>)<sub>k</sub>-sp, wherein

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$A^1$  is  $(CH_2)_t Y (CH_2)_u$ , wherein  
 $Y$  is  $>C=O$ ,  $>NH$ ,  $-O-$ ,  $-S-$  or a bond,  
 $t$  is an integer from 0 to 6 and  
 $u$  is an integer from 0 to 6,  
 $A^2$  is  $-NHCO-$ ,  $-CONH-$ ,  $-OCONH-$  or  $SCONH-$ , or is  $-CO-$ ,  
 $A^3$  is  $(CH_2)_r$ ,  $O(CH_2)_r$ ,  $NH(CH_2)_r$ ,  $S(CH_2)_r$  or  $-(CHQ)-$ , wherein  
 $r$  is an integer from 1 to 6 and  
 $Q$  is a substituted or unsubstituted alkyl or aryl group,  
 $sp$  is a divalent spacer or a bond, and  
 $k$  is an integer from 5 to 100, and  
 $R$  is hydrogen; a ligand suitable for specific bonding to a receptor;  
 a marker molecule; or a catalytically active group; and  
 $m$  is at least 2,  
 with the proviso that  
 (1) in the compound at least one  $R$  is not hydrogen,  
 (2) there are at least two  $K$  that are not a bond, and  
 (3)  $X$ ,  $B$  and  $m$  are so selected that an intermolecular association of the  $K$  in liquid phase  
 by the formation of hydrogen bonds is possible, with formation of aggregates that  
 present on the surface a plurality of  $R$  that are not hydrogen, and  
 (4) the molar mass of the fragment  $X(K)_m$  is less than 20,000, and  
 $n$  is from 2 to 100,000,  
 and wherein  $X(B)_m$  are non-covalently bonded.

11. (Amended) [Aggregate] An aggregate according to claim 10 having a leaf-like, linear, cyclic, polycyclic, polyhedral, spherical or dendritic structure.

12. (Amended) [Aggregate] An aggregate according to claim 10 [or 11] of two or more different compounds [according to any one of claims 1 to 9] comprising a compound of the general formula (I)



wherein

$X$  is an m-valent unit and

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B are identical or different and denote K-R,  
wherein  
K is a bond or is  $A^1-(A^2-A^3)_k\text{-sp}$ , wherein  
 $A^1$  is  $(\text{CH}_2)_t\text{Y}(\text{CH}_2)_u$ , wherein  
Y is  $>\text{C}=\text{O}$ ,  $>\text{NH}$ ,  $-\text{O}-$ ,  $-\text{S}-$  or a bond,  
t is an integer from 0 to 6 and  
u is an integer from 0 to 6,  
 $A^2$  is  $-\text{NHCO}-$ ,  $-\text{CONH}-$ ,  $-\text{OCONH}-$  or  $\text{SCONH}-$ , or is  $-\text{CO}-$ ,  
 $A^3$  is  $(\text{CH}_2)_r$ ,  $\text{O}(\text{CH}_2)_r$ ,  $\text{NH}(\text{CH}_2)_r$ ,  $\text{S}(\text{CH}_2)_r$  or  $-(\text{CHQ})-$ , wherein  
r is an integer from 1 to 6 and  
Q is a substituted or unsubstituted alkyl or aryl group,  
sp is a divalent spacer or a bond, and  
k is an integer from 5 to 100, and  
R is hydrogen; a ligand suitable for specific bonding to a receptor;  
a marker molecule; or a catalytically active group; and  
m is at least 2,  
with the proviso that  
(1) in the compound at least one R is not hydrogen,  
(2) there are at least two K that are not a bond, and  
(3) X, B and m are so selected that an intermolecular association of the K in liquid phase  
by the formation of hydrogen bonds is possible, with formation of aggregates that  
present on the surface a plurality of R that are not hydrogen, and  
(4) the molar mass of the fragment  $\text{X}(\text{K})_m$  is less than 20,000.

Claim 13 has been canceled.

14. (Amended) [Process] A method according to claim [13] 27, further comprising  
 [in the case of a solution of the compound addition of] adding a concentrated salt solution, [a  
 change in] changing the pH or the temperature, or [addition of] adding organic solvents.

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15. (Amended) [Process] A method for changing the structure of [the] an aggregate [as defined in any one of claims 10 to 12, which comprises addition of] of the general formula (II)



wherein

X(B)<sub>m</sub> may be identical or different and denote a compound of the general formula (I),



wherein

X is an m-valent unit and

B are identical or different and denote K-R,

wherein

K is a bond or is A<sup>1</sup>-(A<sup>2</sup>-A<sup>3</sup>)<sub>k</sub>-sp, wherein

A<sup>1</sup> is (CH<sub>2</sub>)<sub>t</sub>Y(CH<sub>2</sub>)<sub>u</sub>, wherein

Y is >C=O, >NH, -O-, -S- or a bond,

t is an integer from 0 to 6 and

u is an integer from 0 to 6,

A<sup>2</sup> is -NHCO-, -CONH-, -OCONH- or SCONH-, or is -CO-,

A<sup>3</sup> is (CH<sub>2</sub>)<sub>r</sub>, O(CH<sub>2</sub>)<sub>r</sub>, NH(CH<sub>2</sub>)<sub>r</sub>, S(CH<sub>2</sub>)<sub>r</sub> or -(CHQ)-, wherein

r is an integer from 1 to 6 and

Q is a substituted or unsubstituted alkyl or aryl group,

sp is a divalent spacer or a bond, and

k is an integer from 5 to 100, and

R is hydrogen; a ligand suitable for specific bonding to a receptor;

a marker molecule; or a catalytically active group; and

m is at least 2,

with the proviso that

(1) in the compound at least one R is not hydrogen,

(2) there are at least two K that are not a bond, and

(3) X, B and m are so selected that an intermolecular association of the K in liquid phase by the formation of hydrogen bonds is possible, with formation of aggregates that present on the surface a plurality of R that are not hydrogen, and

(4) the molar mass of the fragment X(K)<sub>m</sub> is less than 20,000, and

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n is from 2 to 100,000,  
and wherein  $X(B)_m$  are non-covalently bonded,  
further comprising adding a concentrated salt solution, [a change in] changing the  
temperature or the pH [or an addition of] and/or adding urea, trifluoroethanol or peptides.

16. (Amended) [Process for] A method according to claim 27 further comprising  
increasing the specific physiological activities of molecules by [their incorporation as]  
incorporating a radical R into a compound of the general formula (I) [as defined in any one of  
claims 1 to 9].

Claim 17 has been canceled.

18. (Amended) [Preparation according to claim 17 against] A method of treating  
diseases arising from inflammation, viral and bacterial infections, influenza viruses, selectin-  
 mediated inflammatory processes, tumour metastases, or in the neutralisation of antibodies in  
 autoimmune disorders and transplants; said method comprising administering a compound of  
the general formula (I)



wherein

X is an m-valent unit and

B are identical or different and denote K-R,

wherein

K is a bond or is  $A^1-(A^2-A^3)_k$ -sp, wherein

$A^1$  is  $(CH_2)_t Y(CH_2)_u$ , wherein

Y is  $>C=O$ ,  $>NH$ ,  $-O-$ ,  $-S-$  or a bond,

t is an integer from 0 to 6 and

u is an integer from 0 to 6,

$A^2$  is  $-NHCO-$ ,  $-CONH-$ ,  $-OCONH-$  or  $SCONH-$ , or is  $-CO-$ ,

$A^3$  is  $(CH_2)_r$ ,  $O(CH_2)_r$ ,  $NH(CH_2)_r$ ,  $S(CH_2)_r$  or  $-(CHQ)-$ , wherein

r is an integer from 1 to 6 and

Q is a substituted or unsubstituted alkyl or aryl group,

sp is a divalent spacer or a bond, and



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k is an integer from 5 to 100, and  
R is hydrogen; a ligand suitable for specific bonding to a receptor;  
a marker molecule; or a catalytically active group; and  
m is at least 2,  
with the proviso that  
 (1) in the compound at least one R is not hydrogen,  
 (2) there are at least two K that are not a bond, and  
 (3) X, B and m are so selected that an intermolecular association of the K in liquid phase  
by the formation of hydrogen bonds is possible, with formation of aggregates that  
present on the surface a plurality of R that are not hydrogen, and  
 (5) the molar mass of the fragment X(K)<sub>m</sub> is less than 20,000; or  
administering into an aggregate of the general formula (II)  

$$\{X(B)_m\}_n \quad (II)$$
wherein  
X(B)<sub>m</sub> may be identical or different and denote a compound of the general  
formula (I), and  
n is from 2 to 100,000,  
and wherein X(B)<sub>m</sub> are non-covalently bonded.

Claim 19 has been canceled.

20. (Amended) [Use of a compound as defined in any one of claims 1 to 9 or of an aggregate as defined in any one of claims 10 to 12 in the preparation of functionalised] A method according to claim 18 further comprising preparing functionalized molecular surfaces.

Claims 21 and 22 have been canceled.

23. (Amended) [Compound] A compound of the general formula (III),



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wherein

X is an m-valent unit and

B are identical or different and denote K-H,

wherein

K is  $A^1-(A^2-A^3)_k$ -sp, wherein

$A^1$  is  $(CH_2)_tY(CH_2)_u$ , wherein

Y is  $>C=O$ ,  $>NH$ ,  $-O-$ ,  $-S-$  or a bond,

t is an integer from 0 to 6 and

u is an integer from 0 to 6,

$A^2$  is  $-NHCO-$ ,  $-CONH-$ ,  $-OCONH-$  or  $SCONH-$ , or is  $-CO-$ ,

$A^3$  is  $(CH_2)_r$ ,  $O(CH_2)_r$ ,  $NH(CH_2)_r$ ,  $S(CH_2)_r$  or  $-(CHQ)-$ , wherein

r is an integer from 1 to 6 and

Q is a substituted or unsubstituted alkyl or aryl group,

sp is a divalent spacer or a bond, and

k is an integer from 5 to 100, and

m is at least 2,

with the proviso that

- (1) X, B and m are so selected that an intermolecular association of the K in liquid phase is possible, especially under aqueous conditions, by the formation of hydrogen bonds, with formation of aggregates, and
- (2) the molar mass of the fragment  $X(K)_m$  is less than 20,000, especially less than 4000.

Claim 24 has been canceled.

25. (New) A method of preparing a therapeutic drug comprising:  
 preparing a compound of the general formula (III),



wherein

X is an m-valent unit and

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B are identical or different and denote K-H,  
 wherein

K is  $A^1-(A^2-A^3)_k\text{-sp}$ , wherein  
 $A^1$  is  $(\text{CH}_2)_t\text{Y}(\text{CH}_2)_u$ , wherein  
 Y is  $>\text{C}=\text{O}$ ,  $>\text{NH}$ ,  $-\text{O}-$ ,  $-\text{S}-$  or a bond,  
 t is an integer from 0 to 6 and  
 u is an integer from 0 to 6,  
 $A^2$  is  $-\text{NHCO}-$ ,  $-\text{CONH}-$ ,  $-\text{OCONH}-$  or  $\text{SCONH}-$ , or is  $-\text{CO}-$ ,  
 $A^3$  is  $(\text{CH}_2)_r$ ,  $\text{O}(\text{CH}_2)_r$ ,  $\text{NH}(\text{CH}_2)_r$ ,  $\text{S}(\text{CH}_2)_r$  or  $-(\text{CHQ})-$ , wherein  
 r is an integer from 1 to 6 and  
 Q is a substituted or unsubstituted alkyl or aryl group,  
 sp is a divalent spacer or a bond, and  
 k is an integer from 5 to 100, and  
 m is at least 2,

with the proviso that

- (1) X, B and m are so selected that an intermolecular association of the K in liquid phase is possible, especially under aqueous conditions, by the formation of hydrogen bonds, with formation of aggregates, and
- (2) the molar mass of the fragment  $\text{X}(\text{K})_m$  is less than 20,000, especially less than 4000.

26. (New) A method of treating diseases arising from inflammation, viral and bacterial infections, influenza viruses, selectin-mediated inflammatory processes, tumour metastases, or in the neutralisation of antibodies in autoimmune disorders and transplants; said method comprising administering a compound of the general formula (III),



wherein

X is an m-valent unit and  
 B are identical or different and denote K-H,  
 wherein

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K is  $A^1-(A^2-A^3)_k$ -sp, wherein  
 $A^1$  is  $(CH_2)_tY(CH_2)_u$ , wherein  
 Y is  $>C=O$ ,  $>NH$ ,  $-O-$ ,  $-S-$  or a bond,  
 t is an integer from 0 to 6 and  
 u is an integer from 0 to 6,  
 $A^2$  is  $-NHCO-$ ,  $-CONH-$ ,  $-OCONH-$  or  $SCONH-$ , or is  $-CO-$ ,  
 $A^3$  is  $(CH_2)_r$ ,  $O(CH_2)_r$ ,  $NH(CH_2)_r$ ,  $S(CH_2)_r$  or  $-(CHQ)-$ , wherein  
 r is an integer from 1 to 6 and  
 Q is a substituted or unsubstituted alkyl or aryl group,  
 sp is a divalent spacer or a bond, and  
 k is an integer from 5 to 100, and

m is at least 2,

with the proviso that

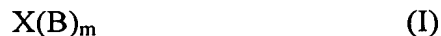
- (1) X, B and m are so selected that an intermolecular association of the K in liquid phase is possible, especially under aqueous conditions, by the formation of hydrogen bonds, with formation of aggregates, and
- (2) the molar mass of the fragment  $X(K)_m$  is less than 20,000, especially less than 4000.

27. (New) A method of preparing an aggregate comprising:  
 preparing a compound of the general formula (II)



wherein

$X(B)_m$  may be identical or different and denote a compound of the general formula (I),



wherein

X is an m-valent unit and

B are identical or different and denote K-R,

wherein

K is a bond or is  $A^1-(A^2-A^3)_k$ -sp, wherein  
 $A^1$  is  $(CH_2)_tY(CH_2)_u$ , wherein  
 Y is  $>C=O$ ,  $>NH$ ,  $-O-$ ,  $-S-$  or a bond,

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t is an integer from 0 to 6 and  
 u is an integer from 0 to 6,  
 $A^2$  is -NHCO-, -CONH-, -OCONH- or SCONH-, or is -CO-,  
 $A^3$  is  $(CH_2)_r$ ,  $O(CH_2)_r$ ,  $NH(CH_2)_r$ ,  $S(CH_2)_r$  or  $-(CHQ)-$ , wherein  
 r is an integer from 1 to 6 and  
 Q is a substituted or unsubstituted alkyl or aryl group,  
 sp is a divalent spacer or a bond, and  
 k is an integer from 5 to 100, and  
 R is hydrogen; a ligand suitable for specific bonding to a receptor;  
 a marker molecule; or a catalytically active group; and  
 m is at least 2,  
 with the proviso that  
 (1) in the compound at least one R is not hydrogen,  
 (2) there are at least two K that are not a bond, and  
 (3) X, B and m are so selected that an intermolecular association of the K in liquid phase  
 by the formation of hydrogen bonds is possible, with formation of aggregates that  
 present on the surface a plurality of R that are not hydrogen, and  
 (4) the molar mass of the fragment  $X(K)_m$  is less than 20,000, and  
 n is from 2 to 100,000,  
 and wherein  $X(B)_m$  are non-covalently bonded.

28. (New) A method of preparing a therapeutic drug comprising:

preparing the compound of the general formula (I)



wherein

X is an m-valent unit and

B are identical or different and denote K-R,

wherein

K is a bond or is  $A^1-(A^2-A^3)_k-sp$ , wherein

$A^1$  is  $(CH_2)_t Y(CH_2)_u$ , wherein

Y is  $>C=O$ ,  $>NH$ , -O-, -S- or a bond,

t is an integer from 0 to 6 and

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u is an integer from 0 to 6,  
 $A^2$  is -NHCO-, -CONH-, -OCONH- or SCONH-, or is -CO-,  
 $A^3$  is  $(CH_2)_r$ ,  $O(CH_2)_r$ ,  $NH(CH_2)_r$ ,  $S(CH_2)_r$  or  $-(CHQ)-$ , wherein  
 r is an integer from 1 to 6 and  
 Q is a substituted or unsubstituted alkyl or aryl group,  
 sp is a divalent spacer or a bond, and  
 k is an integer from 5 to 100, and

R is hydrogen; a ligand suitable for specific bonding to a receptor;  
 a marker molecule; or a catalytically active group; and

m is at least 2,

with the proviso that

- (1) in the compound at least one R is not hydrogen,
- (2) there are at least two K that are not a bond, and
- (3) X, B and m are so selected that an intermolecular association of the K in liquid phase by the formation of hydrogen bonds is possible, with formation of aggregates that present on the surface a plurality of R that are not hydrogen, and
- (4) the molar mass of the fragment  $X(K)_m$  is less than 20,000; or  
 preparing the compound of the general formula (II):



wherein

$X(B)_m$  may be identical or different and denote a compound of the general formula (I), and

n is from 2 to 100,000,

and wherein  $X(B)_m$  are non-covalently bonded; and

a pharmaceutically acceptable carrier.

29. (New) A method of preparing a diagnostic test comprising:

providing a test reagent

preparing a compound of the general formula (I)



wherein

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X is an m-valent unit and

B are identical or different and denote K-R,  
 wherein

K is a bond or is  $A^1-(A^2-A^3)_k\text{-sp}$ , wherein

$A^1$  is  $(\text{CH}_2)_t\text{Y}(\text{CH}_2)_u$ , wherein

Y is  $>\text{C}=\text{O}$ ,  $>\text{NH}$ ,  $-\text{O}-$ ,  $-\text{S}-$  or a bond,

t is an integer from 0 to 6 and

u is an integer from 0 to 6,

$A^2$  is  $-\text{NHCO}-$ ,  $-\text{CONH}-$ ,  $-\text{OCONH}-$  or  $\text{SCONH}-$ , or is  $-\text{CO}-$ ,

$A^3$  is  $(\text{CH}_2)_r$ ,  $\text{O}(\text{CH}_2)_r$ ,  $\text{NH}(\text{CH}_2)_r$ ,  $\text{S}(\text{CH}_2)_r$  or  $-(\text{CHQ})-$ , wherein

r is an integer from 1 to 6 and

Q is a substituted or unsubstituted alkyl or aryl group,

sp is a divalent spacer or a bond, and

k is an integer from 5 to 100, and

R is hydrogen; a ligand suitable for specific bonding to a receptor;  
 a marker molecule; or a catalytically active group; and

m is at least 2,

with the proviso that

- (1) in the compound at least one R is not hydrogen,
- (2) there are at least two K that are not a bond, and
- (3) X, B and m are so selected that an intermolecular association of the K in liquid phase by the formation of hydrogen bonds is possible, with formation of aggregates that present on the surface a plurality of R that are not hydrogen, and
- (5) the molar mass of the fragment  $\text{X}(\text{K})_m$  is less than 20,000; or

preparing an aggregate of the general formula (II)



wherein

$\text{X}(\text{B})_m$  may be identical or different and denote a compound of the general formula (I), and

n is from 2 to 100,000,

and wherein  $\text{X}(\text{B})_m$  are non-covalently bonded;

and comparing the test reagent to the compounds of the general formula (I) or (II).